

## **DIFFUSIVELY REFLECTIVE CIRCULAR POLARIZER FORMED BY THERMO PHASE SEPARATION**

### **ABSTRACT:**

The present invention relates to a circular polarizer, more specifically, to a diffusively reflective circular polarizer (DRCP), which is characterized by broadband reflection and transmission over a hemispheric viewing angle. A thermo phase separation process of a cholesteric liquid crystal polymer system creates the DRCP film. As a multi-functional optical material, the DRCP film combines the merits of polarizer, reflector and diffuser to form an all-in-one component in the electro-optical industry. Moreover, since the novel film has a “silver white” appearance and super “hiding power”, it will initiate many other applications.